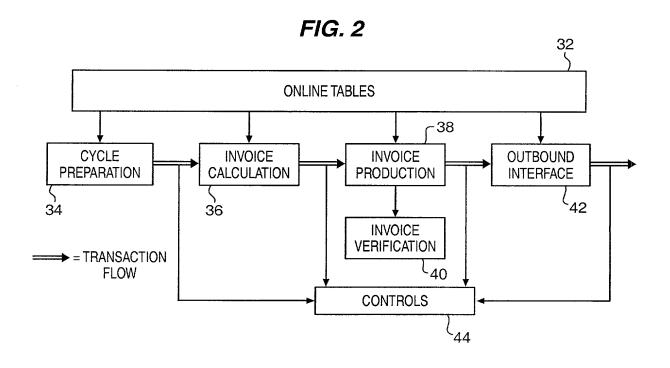
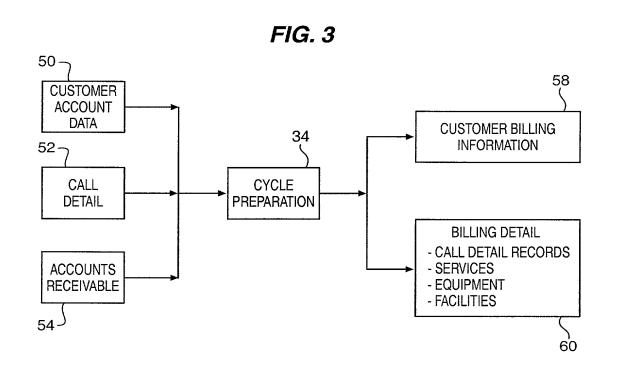


FIG. 1 PRIOR ART





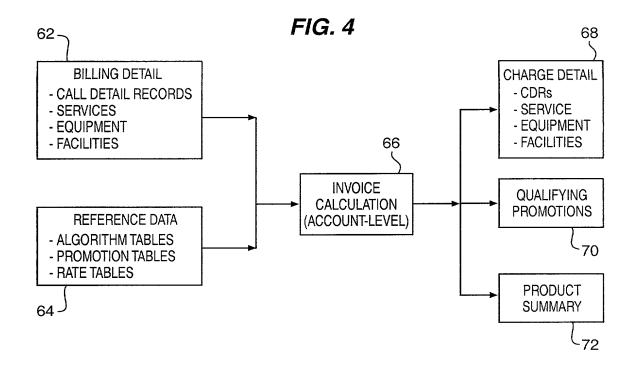
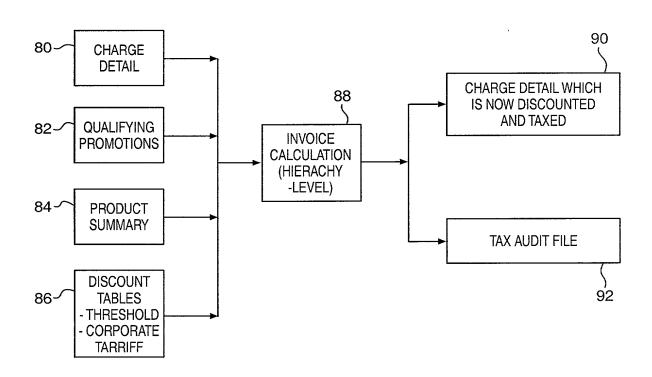
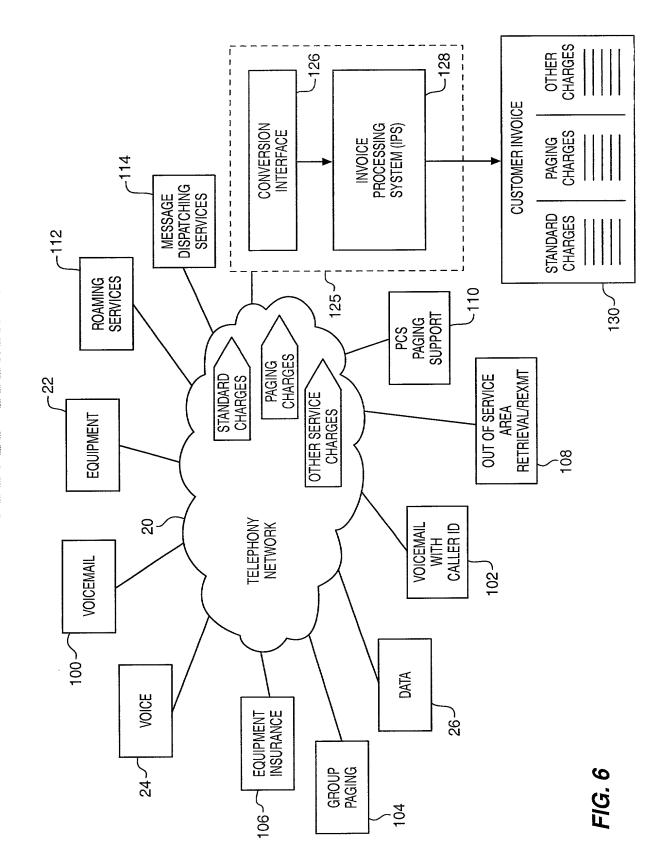


FIG. 5





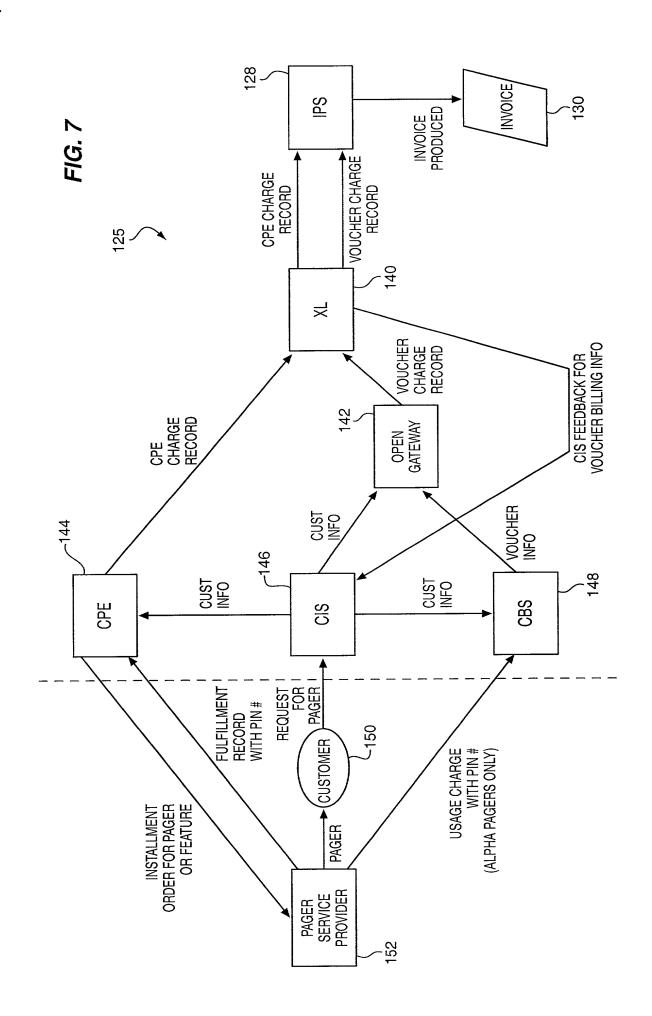


FIG. 8

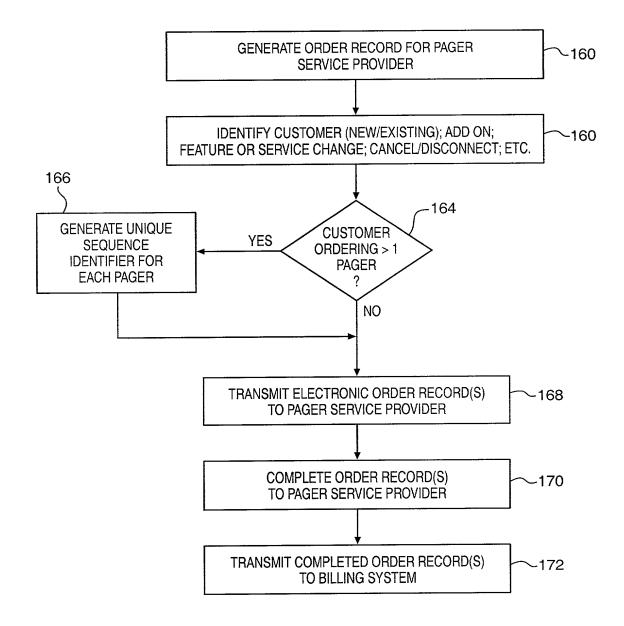


FIG. 9

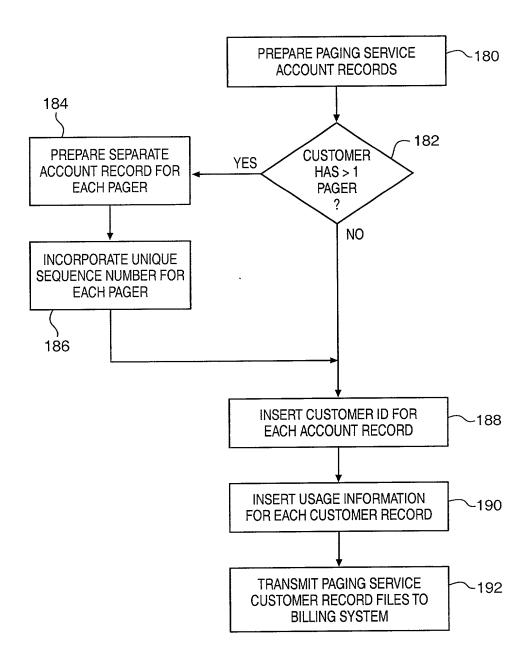


FIG. 10

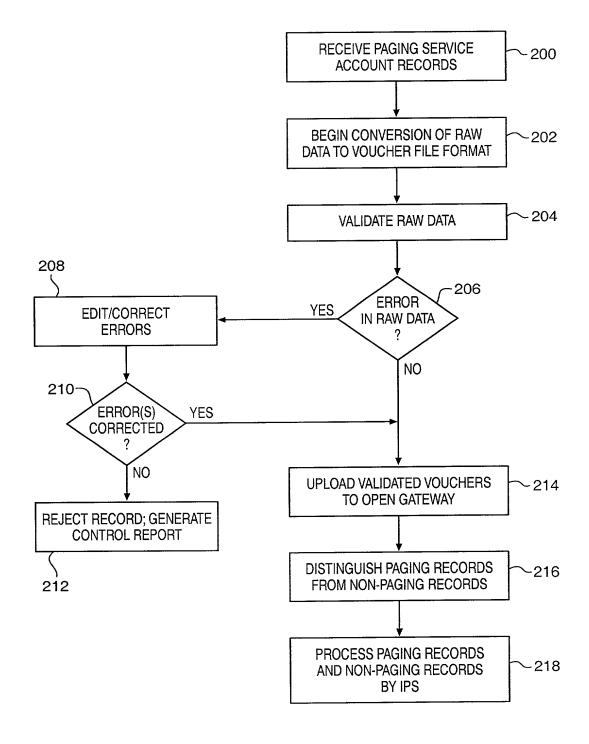


FIG. 11

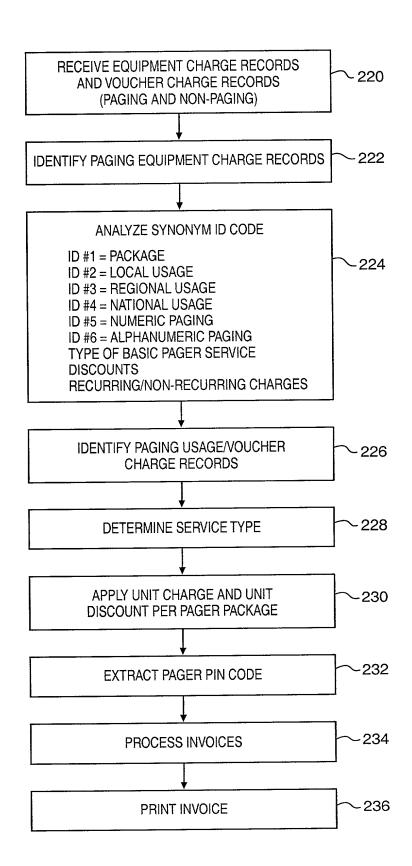


FIG. 12

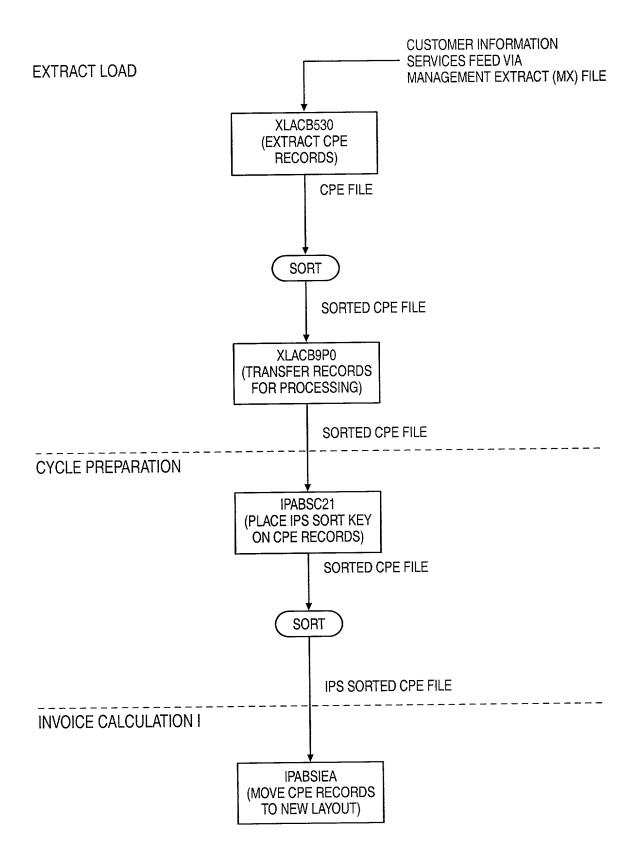
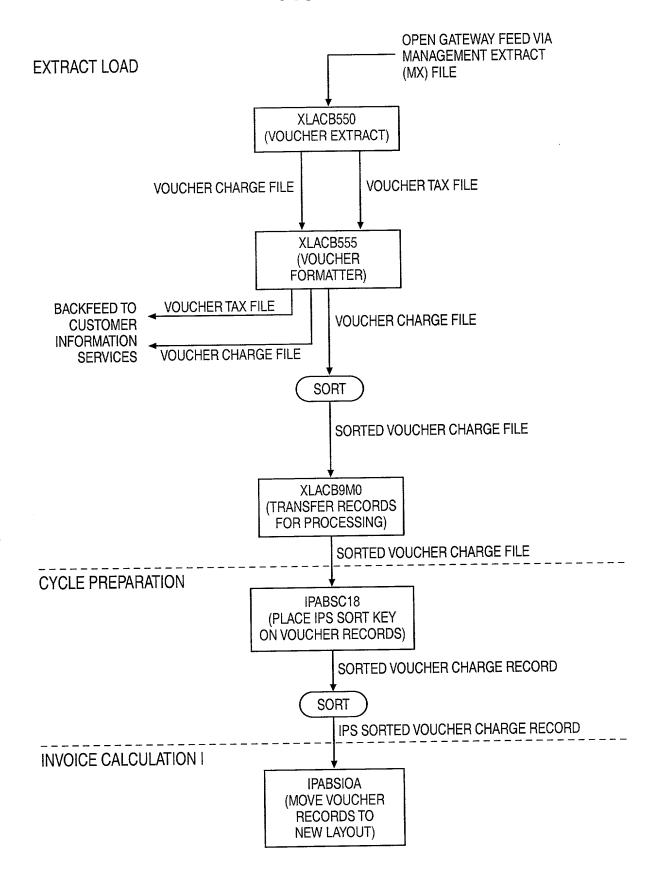


FIG. 13 IPS SORTED CPE FILE INVOICE CALCULATION II **IPABSIPC** (CPE ALLOCATION) **CPE RECORD** IPS SORTED CPE FILE **IPABSIJB** -302 (DISCOUNTS) **CPE** DISCOUNT FILE INVOICE PREPARATION -304 IPABSDF1 IPABSDI1 (DISCOUNT VIEW) (CHARGE VIEW) **CPE CPE** CPE DISCOUNT DISCOUNT **CHARGE VIEW VIEW VIEW** 310 -308 306 IPABSPV4 (ACCOUNT **IPABSPV7** DETAIL (ITEMIZATION **IPABSPVD IPABSPV5 REPORT REPORT** (DISCOUNT FORMATTER) (ACCOUNT FORMATTER) **REPORT** SUMMARY **REPORT** FORMATTER) FORMATTER) **IPABSPVE CHARGE CHARGE** (CHARGE **FILE FILE** REPORT FORMATTER) SORT **SORT** 307 CHARGE SORTED **CHARGE** FILE FILE 312 **QUALITY PRINT** INTERFACE (PRODUCES **IPABSPPQ IPABSPPJ INVOICE FILES**) (ITEMIZATION (ACCOUNT DETAIL DISCOUNT EXIT EXIT) EXIT)

FIG. 14



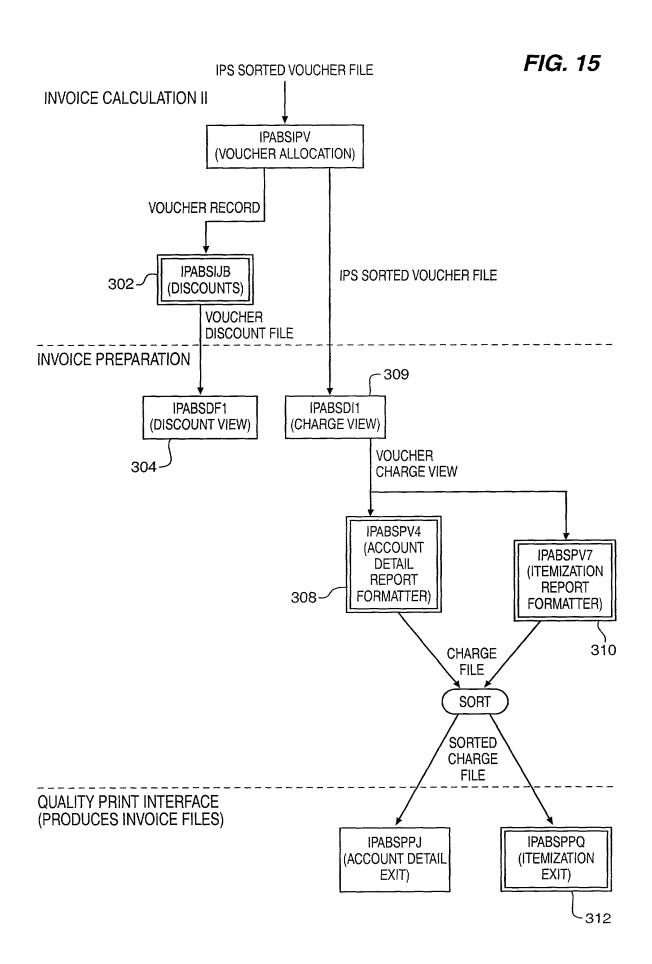


FIG. 16A

NAME **ADDRESS** ADDRESS2 CITY, ST. ZIP

Page: 1 Billing Period Ending: 5/15/97 Invoice Date: 4/12/97

Customer Number: XXXXXXXXX

Summary of Charges

Balance Forward	Account Adjustments	Charges	Discounts	Taxes	Current Total	Payable Upon Receipt
\$390.01	\$.00	\$1,219.30	-\$12.64	\$49.48	\$1,256.14	\$1,646.15

Important Information . . .



* * Attention! Past due balances jeopardize service. * *

Fold, then Detach and Return this Portion with Your Payment

Customer Number: XXXXXXXXX

Payable Upon Receipt \$1,646.15

AMOUNT ENCLOSED \$ _

NAME ADDRESS ADDRESS2 CITY, ST. ZIP

Return name Return Address CITY, ST. ZIP hilldhadhadahandhdhdhallandhadhd

FIG. 16B

NAME COMBINED SERVICES

Page: 2 Billing Period Ending: 5/15/97 Customer Number: XXXXXXXXX

Account Summary

LANCE FORWARD Description			Date	Amount
Previous Balance				\$390.01
BALANCE FORWARD				\$390.01
ULTIPLE ACCOUNT SUMMARY			Tours	 Total
Account NAME	Charges	Discounts	Taxes	rotai
COMBINE SERVICES 840946563	\$70.00	\$.00	\$3.45	\$73 45
NAME CLARITY - SWITCHED 2 YR 142238123	33.12	-1.33	2.86	34.65
NAME CLARITY ATLANTIC - DEDICATED 2 YR 142238123	455.27	-3.53	3.86	455.70
NAME BUSINESS PAGING 157144138	660.91	-7.78	39.21	692.34
CURRENT TOTAL	\$1,219.30	-\$12.64	\$49.48	\$1,256.14
TOTAL AMOUNT DUE - Payable Upon Re	ocint			\$1,646.15

Account Detail NAME COMBINED SERVICES ACCOUNT #: XXXXXXXXX

CHANGES	Amount
LONG DISTANCE MONTHLY CHARGES	\$10.00
SUMMARY OF CHARGES REPORT	10.00
DETAIL OF CHARGES REPORT	25.00
FONVIEW FOR WINDOWS-W/PAPER INVOICE	25.00
CLARITY SERVICE FEE	\$70.00
TOTAL CHARGES	\$70.00
CURRENT MONTH SUBTOTAL	Ų, (ilo
TAXES	\$2.70
STATE SALES TAX	.75
FEDERAL EXCISE TAX TOTAL TAXES	\$3.45

FIG. 16C

NAME CLARITY - SWITCHED 2 YR ACCOUNT #: YYYYYYYYY

International

Operator Service

CLARITY - SWITCHED 2 YR

CHARGES

Page: 3 Billing Period Ending: 5/15/97 Customer Number: XXXXXXXX

Minutes

12.5

9.0

Amount

\$13.30

19.82

Calls

2

3

Account Detail

	0,000		•						
	TOTA	L CHARG	ES				5	21.5	\$33.12
DISCO	UNTS								
	CUS	TOMER C	OUNTRY D	ISC:			UNITED KG	iDM	-\$1.33
	TOTA	L DISCOL	JNTS						-\$1.33
	CUR	RENT MO	NTH SUBT	OTAL	-	-			\$31.79
TAXES									
	STAT	E SALES	TAX						\$1.91
	FEDE	ERAL EXC	ISE TAX						.95
	TOTA	L TAXES							\$2.86
	CURI	RENT TOT	AL - ACCO	UNT	#:YYYYYYYY				\$34.65
					Itemization	of C	Calls		
					710777201101				
ORIGIN			1: 201 555-0	776					
	Nbr 1	Date	Time	Ď.		tion NY	Called Nbr 212 555-2330	Minutes 6.0	Charges \$5.42
	,	2/13/97	3:45 PM <i>STATI</i>	_	NEW YORK TATION From JER:		TY, NJ 201 555-0776	6.0	Φ 3.42
	TOTA	L FOR 20	1 555-0776					6.0	\$5.42
ORIGIN	NATING	NUMBER	: 201 555-0	801					
	2	2/18/97	11:18 AM STATIO	-	SWITZERLAND TATION From JERS		41223180130 TY, NJ 201 555-0801	1.0	\$6.40
	TOTA	L FOR 20	1 555-0801					6.0	\$6.40
ORIGIN	NATING	NUMBER	: 201 555-0	807					
	3	2/11/97	7:00 AM	D	UNITEDKGDM	UK	441712481164	4.7	\$5.13
	TOTA	L FOR 20	1 555-0807					4.7	\$5.13
ORIGIN	NATING	NUMBER	: 201 555-0	950					
	4	2/18/97	10:55 AM STATIO		SWITZERLAND TATION From JERS	SL SEY CIT	41223180130 TY, NJ 201 555-0950	2.0	\$8.00
	TOTA	L FOR 20	1 555-0950					2.0	\$8.00
ORIGIN	VATING	NUMBER	: 201 555-1	057					
	5	2/19/97	8:15 AM	D	UNITEDKGDM	UK	441712481164	7.8	\$8.17
	TOTA	L FOR 20	1 555-1057					7.8	\$8.17
	TOTA	L ITEMIZA	ATION OF C	ALL	S - ACCOUNT #	YYYY	YYYYY	21.5	\$33.12
									

* = The rate in effect at the beginning of the call. For a description of rate periods, please see terms and conditions.

FIG. 16D

NAME
CLARITY ATLANTIC - DEDICATED 2 YR
ACCOUNT #· YYYYYYYY

Page: 4
Billing Period Ending: 5/15/97
Customer Number: XXXXXXXX

Account Detail

	CLARITY AT;ANTIC - DEDICATED 2 YR	Calls	Minutes	Amount
	International	10	36.5	\$35.27
	SUBTOTAL ITEMIZED CALLS	10	36.5	\$35.27
	LONG DISTANCE MONTHLY CHARGES			Amount
	INTL TCO SERVICE FEE			\$100.00
	OTHER CREDITS AND CHARGES			
	FACILITY CHARGE			\$20.00
	TOTAL CHARGES			\$455.27
DISCO	UNTS			
	CUSTOMIZER COUNTRY DISC:	UNITEDK GERMAN		-\$2.69 84
	CUSTOMIZER COUNTRY DISC: TOTAL DISCOUNTS			7
				84
TAXES	TOTAL DISCOUNTS CURRENT MONTH SUBTOTAL			84 -\$3.53
TAXES	TOTAL DISCOUNTS CURRENT MONTH SUBTOTAL			84 -\$3.53
TAXES	TOTAL DISCOUNTS CURRENT MONTH SUBTOTAL			-,84 -\$3.53 \$451.74

Itemization of Calls

REFERENCE ID:5869469

Nbr	Date	Time	*	Called Loca	tion	Called Nbr	Minutes	Charges
1	2/03/97	10:17 AM	D	UNITEDKGDM	UK	441714898033	10.9	\$9.28
2	2/03/97	10:27 AM	D	GERMANY	GE	49699201612	1.5	2.12
3	2/03/97	10:31 AM	D	UNITEDKGDM	UK	441714898033	7.0	6.12
4	2/03/97	10:50 AM	D	UNITEDKGDM	UK	441243388511	5.7	5.05
5	2/03/97	12:04 AM	D	UNITEDKGDM	UK	441714898033	1.5	1.65
6	2/03/97	2:04 AM	Ε	GERMANY	GE	4989222593	.5	.94
7	2/04/97	6:39 AM	N	GERMANY	GE	496920390	2.5	2.58
8	2/04/97	9:15 AM	D	GERMANY	GE	49699201612	2.1	2.72
9	2/04/97	9:45 AM	D	UNITEDKGDM	UK	441714898033	4.3	2.92
10	2/04/97	10:31 AM	D	UNITEDKGDM	UK	441713298595	.5	.84
TOTAL	FOR 5896	59469					36.5	\$35.27
TOTAL	ITEMIZAT	ION OF CA	ALLS	- ACCOUNT #	YYYYY	YYY	36.5	\$35.27

^{* =} The rate in effect at the beginning of the call.
For a description of rate periods, please see terms and conditions.

FIG. 16E

NAME BUSINESS PAGING Account #: ZZZZZZZZZ

Page: 5
Billing Period Ending: 5/15/97
Customer Number: XXXXXXXXX

Account Detail

Account Detail		
CHARGES		
PAGING	Quantity	Amount
ALPHANUMERIC LOCAL PAGING	4	\$77.19
NUMERIC LOCAL PAGING	3	27.30
ALPHANUMERIC NATIONAL PAGING CREDIT	2	-68.50
NUMERIC NATIONAL PAGING	5	120.00
ALPHANUMERIC REGIONAL PAGING	3	109.20
NUMERIC REGIONAL PAGING	3	67.98
OPERATOR DISPATCH CHARGES	1	1.50
OTHER FEATURES/SERVICES/FEES	. 18	58.70
OTHER CREDITS AND CHARGES		
EQUIPMENT CHARGE	8	267.54
TOTAL CHARGES		\$660.91
DISCOUNTS		
NON-USAGE DISCOUNT		-\$3.28
CREDIT CARD PROMOTION		-4.50
TOTAL DISCOUNTS		-\$7.78
CURRENT MONTH SUBTOTAL		\$653.13
TAXES		
STATE SALES TAX		\$39.21
TOTAL TAXES		\$39.21
CURRENT TOTAL - ACCOUNT # ZZZZZZZZZZ		\$692.34
Itemization of Charges		
PAGING ID:		
		

	Billing Period	Amount
DATA SHELF RENTAL	3/25/97 - 4/15/97	\$8.76
CHANNEL BANK SHELF RENTAL	3/25/97 - 4/15/97	62.78
DATA SHELF INSTALLATION	3/25/97 - 6/15/97	FREE
CHANNEL BANK SHELF INSTALL	3/25/97 - 6/15/97	FREE
DATA SHELF RENTAL	4/16/97 - 5/15/97	12.00
CHANNEL BANK SHELF RENTAL	4/16/97 - 5/15/97	86.00
DATA SHELF INSTALLATION	5/16/97 - 6/15/97	12.00
CHANNEL BANK SHELF INSTALL	5/16/97 - 6/15/97	86.00
TOTAL FOR		\$267.54

Paging ID: NNNNNNNN			

	Billing Period	Amount
ALPHA REGIONAL BUNDLED PAGER RENTAL	3/25/97 - 4/15/97	\$29.20
ALPHA REGIONAL BUNDLED PAGER RENTAL	4/16/97 - 5/15/97	40.00
ALPHA REGIONAL BUNDLED PAGER RENTAL	5/16/97 - 6/15/97	40.00
800/PIN ALPHA RETRIEVAL	3/25/97 - 4/15/97	1.46
800/PIN ALPHA RETRIEVAL	4/16/97 - 5/15/97	2.00

FIG. 16F

NAME BUSINESS PAGING Account #: ZZZZZZZZZ Page: 6
Billing Period Ending: 5/15/97
Customer Number: XXXXXXXXX

Itemization of Charges

PAGING ID: NNNNNNNN	Billing Period	Amount
300/PIN ALPHA RETRIEVAL	5/16/97 - 6/15/97	\$2 00
TOTAL FOR: NNNNNNNN		\$114.65
Paging ID: NNNNNNNN		
	Billing Period	Amount
NUMERIC REGIONAL UNBUNDLED PAGER RENTAL NUMERIC REGIONAL UNBUNDLED PAGER RENTAL NUMERIC REGIONAL UNBUNDLED PAGER RENTAL PERSONAL 800 PAGER PROTECT NUMERIC RETR PERSONAL 800 PAGER PROTECT NUMERIC RETR PERSONAL 800 PAGER PROTECT NUMERIC RETR	3/25/97 - 4/15/97 4/16/97 - 5/15/97 5/16/97 - 6/15/97 3/25/97 - 4/15/97 4/16/97 - 5/15/97 5/16/97 - 6/15/97	\$18 18 24.90 24.90 7.25 7.25 7 25
TOTAL FOR: NNNNNNNN		\$87 77
PAGING ID: AAAAAAAAA		
	Billing Period	Amount
NUMERIC NATIONAL BUNDLED PAGER RENTAL NUMERIC NATIONAL BUNDLED PAGER RENTAL 800/PIN PAGER PROTECTION 800/PIN PAGER PROTECTION 800/PIN PAGER PROTECTION	3/25/97 - 4/01/97 4/02/97 - 5/01/97 3/25/97 - 4/15/97 4/16/97 - 5/15/97 5/16/97 - 6/15/97	\$8 10 30.00 1 10 1.50 1 50
TOTAL FOR: AAAAAAAA		\$42 20
PAGING ID: BBBBBBBBB	Billing Poriod	Amount
NUMERIC NATIONAL BUNDLED PAGER RENTAL NUMERIC NATIONAL BUNDLED PAGER RENTAL NUMERIC NATIONAL BUNDLED PAGER RENTAL 800/PIN PAGER PROTECTION 800/PIN PAGER PROTECTION 800/PIN PAGER PROTECTION	Billing Period 3/25/97 - 4/15/97 4/16/97 - 5/15/97 5/16/97 - 6/15/97 3/25/97 - 4/15/97 4/16/97 - 5/15/97 5/16/97 - 6/15/97	\$21.90 30.00 30.00 1.10 1.50
TOTAL FOR: BBBBBBBB	-	\$86.00
PAGING ID: CCCCCCCC	Billing Period	Amount
NUMERIC LOCAL BUNDLED PAGER RENTAL NUMERIC LOCAL BUNDLED PAGER RENTAL NUMERIC LOCAL BUNDLED PAGER RENTAL 800/PIN PAGER PROTECTION NUMERIC RETRIEV 800/PIN PAGER PROTECTION NUMERIC RETRIEV 800/PIN PAGER PROTECTION NUMERIC RETRIEV	3/25/97 - 4/15/97 4/16/97 - 5/15/97 5/16/97 - 6/15/97 5/16/97 - 6/15/97 3/25/97 - 4/15/97 4/16/97 - 5/15/97 5/16/97 - 6/15/97	\$7.30 10.00 10.00 1.64 2.25 2.25
TOTAL FOR: CCCCCCCC		\$33.44
PAGING ID: DDDDDDDDD		
	Billing Period	Amount
ALPHA LOCAL UNBUNDLED PAGER RENTAL ALPHA LOCAL UNBUNDLED PAGER RENTAL	3/14/97 - 3/15/97 3/16/97 - 4/15/97 4/15/97 - 6/15/97	\$2.48 24 90 24.90

FIG. 16G

NAME BUSINESS PAGING Account #: ZZZZZZZZZ

Page: 7 Billing Period Ending: 5/15/97 Customer Number: XXXXXXXX

Itemization of Charges

	Billing Period	Amount
ALPHA NATIONAL BUNDLED PAGER RENTAL CREDI ALPHA NATIONAL BUNDLED PAGER RENTAL CREDI PERSONAL 800 PAGER ALPHA RETRIEVAL PERSONAL 800 PAGER ALPHA RETRIEVAL PERSONAL 800 PAGER ALPHA RETRIEVAL	4/04/97 - 4/15/97 4/16/97 - 5/15/97 3/25/97 - 4/15/97 4/15/97 - 5/15/97 5/15/97 - 6/15/97	-\$18 50 -50 00 5.11 7.00 7.00
TOTAL FOR: EEEEEEEE		-\$49.39
PAGING ID: FFFFFFFF		
	Billing Period	Amount
OPERATOR DISPATCH/3 PAGES @\$.50 EACH	4/02/97 - 5/02/97	\$1.50
TOTAL FOR: FFFFFFFF		\$1.50
TOTAL ITEMIZATION OF CHARGES - ACCOUNT # ZZZZZZZZZ		\$660.91